DTE-27
Attachment A

MEMORANDUM

TO: Andre Molina **DATE:** February 18, 2004

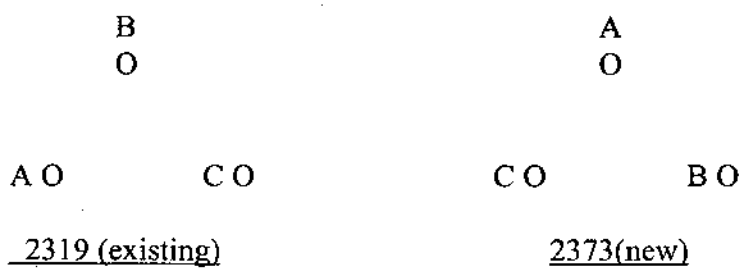
FROM: David K. Pantalone Northborough **FILE:**

SUBJECT: EMF for 2373/2319 ROW, King St, Groveland, MA

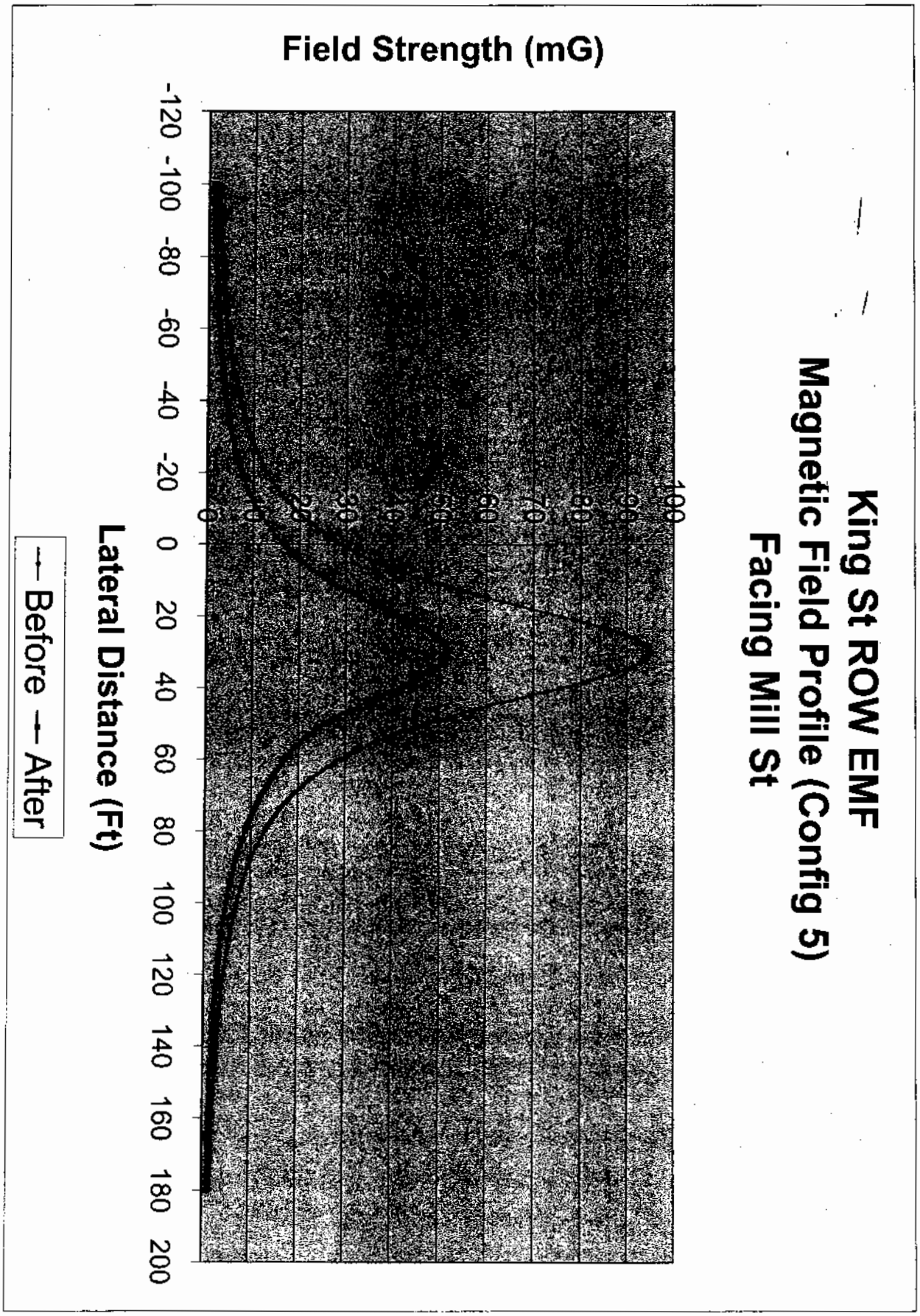
A sensitivity simulation of the magnetic field strength after construction of the 2319 line in the right-of-way outside of the King St. substation in Groveland, MA has been made for different configurations of phase conductors. This analysis has found an arrangement that is more favorable than the one used when simulation results were first reported in November.

Attached is a profile of the magnetic field strength (before and after construction of the new line) in and beyond the right-of-way, with the new phase configuration just simulated. The right-of-way is 80 feet wide with the left edge of the right-of-way corresponding to the Y axis of the plot (zero feet on the X axis). Field strength is shown for a height of 1 meter (3.28 feet) relative to the ground. The orientation of this profile is facing Mill St with King St to the back of the viewer.

The simulation shows a net reduction in the profile's maximum magnetic field strength as a result of the addition of the 2319 line and as a result of the following phase rotation:



I would also like to note that the field strength at the nearest residence, which is 50 ft beyond the edge of the ROW on the right side of the profile shown (130 ft on X axis), after construction of the new line, is 2.5mg.


King St ROW EMF
Magnetic Field Profile (Config 5)
Facing Mill St
Field Strength (mG)
0
10
20
30
40
50
60
70
80
90
100
-120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 160 180 200
Lateral Distance (Ft)
Before
After